

says, "I have never succeeded in tracing vessels into it, but the vessels of the testis generally are enlarged, and appear more numerous than usual" (p. 317); of course, therefore, much stress cannot be laid upon the statement mentioned by Mr. Hamilton, that the tubercular may be distinguished from the fibrinous deposit, by the non-susceptibility of the former to the entrance of an injection.

With respect to the treatment of the complaint, Mr. Hamilton thinks that the *simple* syphilitic orchitis is most readily cured by the internal and external employment of mercury; and that the *tubercular* variety is best treated by a combination of the same method with the use also of iodide of potassium internally. This treatment seems to have been eminently successful in Mr. Hamilton's cases, and, in those which he calls *tubercular*, more successful, we should think, than it is usually found to be.

In conclusion, we think that the great fault of Mr. Hamilton's essay is, that he has not sufficiently compared his own observations and impressions with those of other writers; and consequently he has, we fear, been sometimes led astray.

We shall be happy, however, to renew our acquaintance with him, on the appearance of his second essay.

F. W. S.

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ART. XXI.—*Report of the Committee of Internal Health on the Asiatic Cholera, together with a Report of the City Physician (DR. HENRY G. CLARK) on the Cholera Hospital.* Boston, 1849: 8vo. pp. 182.

IN the epidemic of 1849, the first death from cholera at Boston took place on the 3d of June, and the last on the 13th of September. The disease continuing thus to prevail for nearly four months. We have no account of the entire number of cases that occurred during this period. The number of deaths reported at the register's office was 611; 160 were Americans, of whom 79 were Bostonians.

The disease was chiefly confined to that portion of the population who were destitute of the common comforts of life, or whose habits were intemperate, and to those localities which were over-crowded with inhabitants and deficient in ventilation, drainage, and cleanliness. Insulated instances of the disease were noticed in even the most salubrious portions of the city; while, from the general influence of the epidemic cause of the cholera, no class of the community were perfectly free; still, the number of those in easy circumstances, who were actually attacked by the disease, were so small that they might almost be overlooked in the history of its visitation.

The general opinion of the physicians of Boston seems to have been opposed to the contagious character of the disease. In the cholera hospital there were about twenty-five attendants, exclusive of medical officers, at different times, all of whom were more or less constantly in proximity to the subjects and their excretions, and many of them were only for a very few hours at a time out of the ward. Four physicians and four medical students were engaged in the duties of the hospital; two of the latter for a short period only. Of the others, the students were untiring in their devotion to the sick; often irregular in their meals, and having a much smaller allowance of sleep than nature is supposed to require. The physicians spent from six to eight hours daily in the house, until about the close of the epidemic; and when the number of patients was large, were often engaged in the duties properly belonging to the nurses. Of all these attendants, but two had the symptoms of the disease, and in one of these they were not all present, and in the other rice-water discharges were entirely wanting. Two of the attendants had cholera at the time they entered the house, and neither of them had any return of the disease.

The first patient was received in the hospital on the 29th of June, the last on the 29th of September. During this period the entire number received was 262; of these 166 died and 96 recovered.

We shall present, almost entire, the account given of the *post-mortem* appearances detected in the examinations made at the hospital.

"The most remarkable and constant appearances were the following:—

"1st. An unusual dryness of the pleura—particularly where the anterior edges of the lungs overlap the pericardium; so that, on raising them, the two pleural surfaces separated from each other with some difficulty, and presented a dry and wrinkled appearance, instead of their usual moist and polished aspect.

"2d. A nearly empty condition of the pericardium; that cavity often containing not more than eight or ten drops of fluid.

"3d. The peritoneum was smeared with a thin layer of slimy opaline secretion, which was drawn out into minute threads on separating the convolutions of the small intestines. When this substance was not in sufficient quantity to be visible on the peritoneal surface, it could be collected by drawing a few coils of intestine through the fingers, when its slimy, sticky feel was easily recognizable.

"4th. A moderate swelling and opacity of Peyer's patches, and of the solitary glands of the lower part of the small intestines—in the large intestine, a similar development of the mucous follicles, the mouths of which were often widely open, and sometimes marked by a black point.

"5th. A shrivelled condition of the spleen, with deficiency of blood.

"6th. A completely contracted and empty state of the urinary bladder, the mucous surface of which was smeared with a thickish creamy secretion, sometimes abundant, sometimes moderate in amount.

"7th The mucous surface of the vagina was smeared with a somewhat similar secretion, but thicker and less opaque than that in the bladder—rather like thick starch in consistency and aspect.

"The whole number of recorded autopsies was 33; of these subjects, 12 were males and 21 females. The large majority were adults. The youngest was eight, the oldest sixty years of age. In fifteen cases there were marks of previous disease; mostly tubercular deposits, peritoneal adhesions, fibrous tumours of the uterus, &c. &c. In this are not included such alterations as old pleuritic adhesions and simple ovarian cysts; these lesions being everywhere so frequently met with. In five cases only was there any previous disease in an active condition, viz., two of pulmonary phthisis, one of tubercular pleurisy, one of cirrhosis of the liver, and one of a fibrous tumour of the uterus, which had induced redness and softening of part of the uterine substance.

"*Rigor mortis* was established in every instance. In one case it was slight, and in a few unusually strong—generally, neither deficient nor excessive.

"The blood was not so much altered, in its gross appearance, as might have been expected from previous accounts. It has been represented as quite fluid and destitute of coagula. In point of fact, the coagulum was, as a general rule, remarkably deficient in quantity, or consistency, or both; but not, by any means, universally. In two cases, the coagulum in the heart was unusually abundant, and of firm consistency; in eight, it was moderate in amount, and of natural firmness; and in twenty, it was small, trifling, or insignificant in quantity, and loose, gelatinous, or semi-fluid. In three cases, only, was it entirely wanting. Coagula, however, often existed in the heart, when they were not to be found in any other part of the body.

"The consistency of the fluid part of the blood, after death, varied considerably. In some cases no remarkable alteration was observed; in some, it was recorded as natural; and, in two or three, it was unusually thin and fluid. In fifteen cases, it was more or less thick and tarry, either throughout the system, or in particular situations. For, what was sufficiently remarkable, the consistency of the blood often varied in different vessels in the same subject."

"No constant relation was found to exist between the consistency of the coagula and the length of time the patient had been ill."

"In five cases, there was a dusky red staining of the endocardium, or some of the lining membrane of the vessels, owing to the solution of the blood globules, and consequent imbibition of the colouring matter. This took place occasionally, in certain situations, while the remainder of the vascular membrane was free from alteration." "This process had, apparently, some connection with the consistency of the blood, though not, perhaps, precisely that which we should expect; the staining sometimes being most strongly marked when the blood was thickest."

"In fourteen cases, *ecchymoses* were observed in various situations; mostly on the pericardium and external surface of the heart, or internally, immediately beneath the endocardium; occasionally in the cellular tissue of the lungs, on the surface of the kidneys, and between the lobules of the pancreas.

"The *brain* was, at most, universally natural in colour, vascularity and consistency. In three cases only was there any appreciable softening of the cerebral substance; and in three, some bloody engorgement, viz., in one case, of the hemispheres generally; in one, of their superficial parts; and in one, of the lining membrane of the ventricles. The effusion of clear or reddish fluid into the arachnoid cavity, among the meshes of the pia mater, and into the lateral ventricles, was a much more common occurrence. This, however, was moderate in amount; the fluid in the ventricles varying from a few drops to two drachms. In three cases only was the quantity of fluid in the ventricles considerable: in one, these cavities were said to be filled with the fluid; in another, the quantity was estimated at one ounce.

"The most remarkable circumstance noticed in the head was the presence of a quantity of dark, thick, bloody fluid in the arachnoid cavity, over the posterior part of the convexities of the hemispheres, just sufficient to smear the arachnoid surfaces, the arachnoid itself remaining at the same time quite natural. This appearance presented itself in fifteen cases. When first observed, it was so remarkable and unexpected that it was thought the blood might have escaped accidentally from ruptured vessels, through some carelessness in separating the skull from the dura mater; but it occurred so frequently afterwards, and always in the same situation, as to leave no doubt that it was a true morbid appearance, and a consequence of the disease. Considering its constant situation at the most dependent parts of the brain, and the fact that the arachnoid membrane itself always retained its natural transparent and polished aspect, this appearance seemed to be, in all probability, rather a post-mortem transudation, owing to the peculiar condition of the blood, than any effusion which had taken place during life."

Pains were taken to determine this point in one case. The patient lay upon her back until the moment of death, when the body was turned immediately upon its left side and kept in that position until examined, sixteen hours afterwards. In almost every other case the exudation was similar on the two sides of the brain. In this it was trifling, light coloured, and thin to the right of the longitudinal sinus, but on the left side, copious, dark coloured and thick. In one case, besides the above effusion,

"There was a thin plate of red *coagulum* on the superior surface of the cerebellum which had taken the form of the cavity into which it was effused. This effusion, apparently, must have taken place during life, and at an early period of the disease, since the coagulum was considerably firmer than that in any other part of the body.

"Nothing was observed in any instance like the *sticky varnish* described by Tardieu as coating the surfaces of the arachnoid."

"The *spinal cord* was examined in two cases. In the first, in which death took place in the choleric stage, it was absolutely natural in every respect. In the other, in which death took place in the febrile stage, it was decidedly softened in the cervical portion, and a little, also, in the dorsal, with some bloody œdema of the adjacent cellular tissue. These were the only alterations observed.

"Though congestion of the heart and lungs may very possibly exist during the early stages of the disease, yet it was not generally found to any great extent after death. In a majority of cases the lungs were natural in appearance, except for that moderate degree of engorgement of the dependent parts, which we are not surprised to see in any subject. In three cases there were marks of unnatural congestion. In six, the lungs were deficient in fluids, dryish, much collapsed and shrivelled. In one case, there was general emphysema; in two *ecchymoses*, and in one, where the patient had secondary fever, pneumonia.

"The right cavities of the heart contained a moderate quantity of blood, in fifteen cases, and in thirteen they were full. They were absolutely distended in only three; but these were not the same three cases in which the lungs were

congested. In two cases, the quantity of blood in the heart was deficient. The left ventricle of the heart was firm and thoroughly contracted in nine cases. It was more or less deficient in firmness in thirteen, and in ten it was completely flaccid. In one case its condition was only remarked as 'natural.'

"*Contents of the alimentary canal.*—These varied greatly in quantity, colour, and consistency. They were thick, thin, gruelly, grey, yellow, yellowish, white, pink, reddish, or puriform. They were sometimes like soap and water; sometimes thickish and dull red in colour, as if mixed with red paint; sometimes they presented the appearance of true 'rice water;' *i. e.*, a thin, whitish, opaline fluid, which deposited a quantity of very fine white flocculi, looking, when collected at the bottom, like a layer of pure pus. Almost always the contents of the stomach and the small and large intestines differed from each other in colour, consistency, or both." "On several occasions, the ordinary reagents showed the presence of albumen in the fluid part of the intestinal contents in considerable or moderate quantity. Examined by the microscope, the flocculi suspended in the rice-water fluid invariably consisted of columnar epithelium floating about in larger or smaller masses, or as detached cells. These epithelium cells were so abundant and well defined as to leave no doubt that they constituted nineteen-twentieths of the mass of the flocculi."

In reference to the opinion advanced by Dr. Gairdner of Edinburgh, that the exfoliation of the epithelium of the intestinal mucous membrane, giving rise to the presence of these cells in the dejections and contents of the alimentary canal, is entirely a *post-mortem* occurrence, owing to the maceration of the intestinal mucous membrane by the contained fluid, the report before us presents the following remarks:—

"If maceration is the only cause of the separation of such an enormous quantity of epithelium, how shall we explain its occurrence in other situations, where no unusual amount of fluid has existed? The mucous surfaces of the vagina, and of the urinary bladder are invariably smeared with a thick, whitish, pasty, or creamy secretion, which, on microscopic examination, is seen to consist entirely of detached epithelium cells, mostly perfect in shape, and generally distinctly nucleated. But *these* passages have not been subjected to maceration. The urinary bladder, indeed, is completely empty, and from the first moment of the disease, has been deprived of the fluid which it contained in health. Dr. Gairdner's opinion does not, therefore, seem entirely well-founded. The fact that epithelium cells are not so distinctly recognizable in the cholera stools passed during life, is probably to be explained by the circumstance that, in their passage through the intestinal canal, they become, to a certain extent, disintegrated. We have sometimes seen, mixed with the columnar epithelium, small roundish bodies like the nuclei of destroyed or unformed epithelium cells. Since the violent purging, in cholera, very commonly ceases during the last hours of life, we can easily understand why the epithelium cells, thrown off after that period, should remain uninjured. The bowels are then comparatively quiet, and they are not so much exposed to the causes of injury as those which were evacuated in the earlier stages of the disease."

"The internal surface of the stomach and intestines was almost universally pale, or natural in colour. Its usual appearance was that of general paleness, with slight or moderate redness in some parts. It was very common to find the small intestines generally pale, stained yellow at their upper extremity, and moderately reddened toward the lower part of the ileum. In no instance was the redness general. The intestinal villi were almost always unusually distinct, appearing tumefied, and whitish opaque in colour. The spots of redness were not unfrequently produced by scarlet colouration of the villi, while the rest of the mucous membrane retained its natural paleness. This condition was very readily distinguishable on close examination."

"The *kidneys* did not usually present any remarkable alterations in appearance; the most common being flaccidity of tissue, without noticeable increase or diminution in volume. Beside this, the kidneys were occasionally entirely destitute of their ordinary renal odour, and exhaled from their cut surfaces a very distinct and peculiar smell, resembling that of molasses. This was noticed in only four instances; but as our attention was not directed to this circumstance until a late period in the epidemic, it may have existed more frequently."

It is remarked that decided variations took place during the course of the epidemic, in the frequency of certain *post-mortem* appearances, as well as of some of the symptoms during life. At first, the coagula in the heart were not unfrequently moderate in quantity and consistency, and sometimes even remarkably abundant and firm. Afterward, however, they were almost invariably deficient and loose, or even entirely wanting. In the early part of the epidemic, also, spots of ecchymosis on the heart, externally or internally, were an almost constant symptom; at a later period this appearance was rarely met with.

The account of the treatment pursued in the cholera hospital at Boston will require only a passing notice. The effects of the remedies as there exhibited will scarcely advance us a single step in our investigation of the therapeutics of cholera. The late period of the disease in which the patients were sent in precluded the possibility of any beneficial result being derived from the best devised and most energetic treatment. Everything that has been suggested or imagined as a remedy in cholera appears to have been tried; and when these were found to fail in arresting the fatal course of the malady, the gentlemen having charge of the hospital were willing to try the popular forms of empirical practice. "*The wet sheet* (packing, so called) was tried faithfully; but every patient upon whom it was tried died." Homœopathy was next invoked to lend its aid; but its professors, who were too cunning to put to so severe a test the virtue of drop doses of camphor-water, as an infallible cholera specific, refused their aid. Though no doubt they make the most of the invitation extended to them, quoting it as a confession, on the part of the regular physicians, of the greater certainty of homœopathic treatment in the arrest of cholera.

*Narcotics*, we are told, totally failed of any beneficial effects; *stimulants* almost always failed; *electricity* failed entirely; *calomel* produced no evident effect; the same is true of *quinia*. *Ipecacuhana* and *capsicum* in powder, about forty grains to a drachm of each, were always exhibited in the early cases, with at least temporary relief. The pulse, which was often gone, returned at the wrist, and with it, the warmth of surface. It is queried, how much the omission of this treatment, if anything, had to do with the greater mortality in later cases. "*Tannic acid* was frequently used in enemata, in proportions of five or six grains to the ounce of fluid, and almost always with temporary relief of the purging. By the stomach, in doses of two or three grains, it sometimes appeared to check vomiting." The *astringents* and *aromatics* had usually but little if any effect. *Ether*, by inhalation, relieved the cramps, but appeared to have no effect in arresting the fatal course of the disease. *Cathartics* were never used until the dangerous period was supposed to be passed. *Venous injection* was tried but abandoned, its effects being merely temporary. *External heat* and *rubefacients* were freely employed; but generally, after collapse was marked, these remedies had no other effect than to annoy and irritate the patients. "Those patients who could be induced to remain covered with blankets fared the best, with or without other artificial heat. Those who were restless and threw off the clothing invariably died." *Drinks*, of whatever nature, were useless. Those who drank the least, vomited and purged the least. "Those patients to whom drink was steadily refused, neither vomited nor purged freely afterwards—often not at all. They more speedily grew warm, and those who, for an hour, were kept closely enveloped in blankets, and took no medicines and got no drink, suffered the least, and were the most likely to recover." *Hot baths* were painful to the patients, and they generally sank speedily after their use. *Cold sponge baths* were more grateful, and even during collapse they seemed for a short time to revive the patients. Bladders of ice to the head and cold effusion were resorted to, advantageously, in cases of violent delirium. *Bleeding* by the lancet and by cupping was several times resorted to. Before the cramps ceased great relief was experienced from the lancet; later, like other remedies, it was of little avail. "Of bleeding, in an early stage of the disease, we are inclined," the reporter remarks, "to speak quite favourably, though not with so much enthusiasm as many East Indian surgeons do. The extraction of blood from the nape of the neck by cups, was, in a few cases, useful." *Creasote* sometimes seemed to relieve the vomiting, but not so invari-



ably or effectually as the *wood naphtha*, which failed in no case in which it was used. It was given in various doses, clear, from twenty minims to a drachm.

"Much benefit was thought to be derived from the exhibition of *saline medicines*. Stevens' mixture of the chlorate of potash, in solution, with the hydrochlorate and bicarbonate of soda, was the form in which salines were usually given. We used larger doses of the chlorate, generally, than Stevens recommends, but are not able to say that this was an advantage."

In all the fatal cases, *post-mortem* contractions were either seen or could be excited. They generally commenced about fifteen minutes after death. In one case the muscular action was so great, thirty minutes after death, that the nurses supposed the subject to be still alive. The external muscles in this case were in constant action, the motions progressing, like tides, from one to the other of their extremities. The contractions were strongest in the extensors of the thighs.

Upon the whole, the report before us is a highly interesting one. Although it throws but little light upon the pathology and treatment of cholera, it records facts of great importance to the future historian of the disease. D. F. C.

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ART. XXII.—*The Annual Report of the Board of Health of the City of New Orleans*, for 1849. 8vo. pp. 16. New Orleans, 1850.

THIS is a very interesting report. We confess, however, that we cannot commend the style in which it is written, but are disposed to overlook its deficiencies in this respect, in consequence of the valuable facts and suggestions it presents in reference to the sanitary condition of the great emporium of the south.

The report is made in obedience to a provision contained in the Act passed in 1848, for the establishment of a Board of Health, in and for the parish of New Orleans, requiring a report as to the health of the city for the preceding year, and suggestions as to the means for improving the same, to be made annually to the several councils.

The importance of an accurate registration of deaths in every community is pointed out, in the commencement of the report, in language scarcely too strong:—

"If a city or country is ignorant of the diseases fatal to its population; if it does not know the age at death, sex, colour, length of residence, occupation, and in what part of the city death took place, it must be ignorant of one of its most important duties; that which is dearest to every human being, its *sanitary condition*; the influence of the place on the lives of the inhabitants; the actual climate in which they live—the value of life there, or expectation of living; on what portion of the population it bears with greatest or least severity, or what part of the city requires ameliorations; in fact, whether that community is advancing or retrograding in these important particulars: and all laws intended to benefit the sanitary condition without a previous knowledge of *what that sanitary condition is*, are deficient in the basis of all wise legislation, and trifle with common sense."

Though badly constructed, the foregoing sentence expresses truths which it is the duty of physicians throughout our Union to press upon the attention of the legislatures of the several states, in the hopes of inducing them to provide by law for the accurate registration, not only of the deaths which take place in each section and locality within their jurisdictions, but also of the births and marriages, without a knowledge of which the actual sanitary condition of any given place can scarcely be determined with certainty. To use the language of the report before us:—

"All other modes of estimating the prosperity of a community are deceptive; it is in vain to look at the increase of the exports and the imports; its growth in area; its splendid architectural ornaments, even its increase in population, *all are illusory*; the true touch stone is its *SANITARY CONDITION*;—the deaths to population; the average age at death; the real value or expectation of life," and, we would add the ratio of births to marriages, and of deaths to births.